

ABSTRACT

The present invention provides an actuator using a fluid cylinder capable of imparting stiffness to a fluid cylinder such as an air cylinder with a simple constitution, a control method thereof and a choke valve device. The actuator is provided with a fluid cylinder 1, a first choke valve device 3 and a second choke valve device 5. The fluid cylinder 1 has a cylinder chamber 7 and a piston 12 disposed slidably in the cylinder chamber 7 so as to partition the cylinder chamber 7 into a first chamber 9 and a second chamber 11. The first choke valve device 3 is disposed between a fluid pressure source and the first chamber 9; and the second choke valve device 5 is disposed between the fluid pressure source and the second chamber 11. Each of the choke valve devices 3 and 5 is provided with a discharge valve mechanism capable of changing the opening of the valve.